

(19)



JAPANESE PATENT OFFICE

## PATENT ABSTRACTS OF JAPAN

(11) Publication number: **2000000439 A**

(43) Date of publication of application: 07.01.00

(51) Int. Cl. **B01D 63/02**  
**B01D 61/14**  
**B01D 61/58**

(21) Application number: **10167065**(71) Applicant: **TORAY IND INC**(22) Date of filing: **15.06.98**

(72) Inventor: **FUJII YOSHINARI**  
**SAKAI KENJI**

(54) **HOLLOW FIBER MEMBRANE TYPE FILTER**  
**MEMBRANE MODULE**

## (57) Abstract:

**PROBLEM TO BE SOLVED:** To surely remove foreign matter including pathogenic protozoa, etc., in spite of the rupture of hollow fiber membranes by building a filter member consisting of a filter material having the pore diameter larger than the pore diameter of the hollow fiber membranes into a membrane permeation side to filter the permeated liquid of the hollow fiber membranes.

**SOLUTION:** Hollow fiber membranes 2 bundled to a U shape are inserted into an outer cylinder 1 of a membrane module and a bundle of the hollow fiber membranes 2 is adhered and fixed by a potting material 3 at the end of the outer cylinder 1. A filter member 5 consisting of the filter material having the pore diameter larger than the pore diameter of the hollow fiber membranes 2 is built into the outer cylinder by bringing the same into contact with aperture end faces 4 of the hollow fiber membranes 2. A module cap 8 for collecting the filtrate is then mounted at the end faces. The raw water contg. pollutants from raw water supply nozzles 10A and 10B is introduced into a membrane

module and is permeated through the membranes from the outer side to the inner side of the hollow fiber membranes 2. The membrane filtrate is passed to the filter member 5 and is taken out to the outside of the membrane module from a permeated water outlet nozzle 6.

COPYRIGHT: (C)2000,JPO

